

## **REMARKS**

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1-5 are now present in the application. The specification and claims 1, 2 and 4 have been amended. Claims 1 and 4 are independent. Reconsideration of this application, as amended, is respectfully requested.

### **Reasons For Entry Of Amendments**

As discussed in greater detail hereinafter, Applicant respectfully submits that the rejections under 35 U.S.C. § 112 and 103(a) are improper and should immediately be withdrawn. Accordingly, the finality of the Final Office Action mailed on August 22, 2005 should be withdrawn.

In addition, claims 1, 2 and 4 have been amended to simply remove the presence of minor informalities. Therefore, no new issue should be raised.

If the Examiner persists in maintaining his rejections, Applicant submits that this Amendment was not presented at an earlier date in view of the fact that Applicant is responding to a new ground of rejection set forth in the Final Office Action. In accordance with the requirements of 37 C.F.R. §1.116, Applicant respectfully requests entry and consideration of the foregoing amendments as they remove issues for appeal.

### **Specification**

The specification has been amended to comply with the enablement requirement under 35 U.S.C. § 112, first paragraph.

In particular, paragraph [0024] has been amended to further clarify the Z value and Zth values and to correct some errors to clarify the present invention, and paragraph [0025] has been amended to further clarify the Color-variation test. Paragraphs [0020], [0047], and [0057] have been amended to correct grammatical errors. Applicant respectfully submits that no new matter is entered. Entry of the above amendments to the specification is earnestly solicited.

### **Claim Rejections Under 35 U.S.C. §112**

Claims 1-5 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. This rejection is respectfully traversed.

In view of the foregoing amendments, it is respectfully submitted that this rejection has been addressed. In particular, the specification has been amended to briefly define the term – Z value, which is a well-known parameter in the art representing the depth value of an object projected onto a pixel. It is respectfully submitted that Z value is different from Zth value, and Applicant has corrected the grammatical errors in the specification that may have caused the confusion that the two values are the same. Zth value is a threshold value for determining whether the relationships of Formulas 1 – 4 disclosed in the claimed invention are true. Z value is not a brightness value. Z(0,0) in Table 1 denotes the Z value of a pixel located at (0,0), and as aforementioned, Z value is the depth value of an object projected onto a pixel. In the previous Reply, the word “coordinate” added in claims 1 and 4 was meant to modify Z value so that the Examiner could better understand the concept of Z value; however, the attempt to clarify the definition of Z value failed and instead the word has caused confusion in the relationship between the Z value and x and y coordinates. Therefore, in order to resolve this confusion and to

clearly state what Z value is, Applicant has amended claims 1 and 4 to remove the word “coordinate” and amended the specification, as mentioned above, to include a brief definition of Z value. Moreover, a reference (3D Computer Graphics by Alan H. Watt, 3<sup>rd</sup> Edition) explaining the well-known parameter, Z value (Page 149, line 6 of the first paragraph in section 5.2.3 “Three-dimensional screen space”), is attached with this response. Hence, Z value is now clearly defined in the specification.

Accordingly, all pending claims comply with the enablement requirement. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, are therefore respectfully requested.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Watkins, U.S. Patent No. 4,918,628. This rejection is respectfully traversed.

The Examiner states that Watkins teaches a post filtering method for eliminating jagged effects before outputting graphic image in accordance with the characteristics of each of the pixels to **prioritize** pixels to perform filtering.

The claimed invention is directed to a post-filtering method for eliminating jagged effects before outputting graphic images in accordance with the characteristics of each of the pixels to determine if a pixel needs to undergo filtering. The characteristics of a pixel includes, as stated in the specification, Z value and color of the pixel. Several tests are used in combination to determine whether a pixel needs to be filtered, and Z value is one of the factors in some of those tests.

On the contrary, Watkins discloses a system embodied as a process for resolving priority between polygons contending for individual areas in a display, *e.g.* pixels or subpixels, and then the system filters the pixel data. As shown in FIGs. 1-4 and the corresponding description, the prioritizing of pixels in Watkins is for deciding which polygon (among polygons 10 and 12), each of which has an elemental area (32 and 32b, respectively), would dominate the color and intensity of a pixel (32a) on a screen (S), and the calculation of  $\Delta Z$  is for prioritizing the pixels. The filtering of pixels in Watkins is to divide a pixel (36a) lying on an edge (18a) into subpixels and individually award such subpixels to polygons so that the edge (18a) displayed appears to the human eye as smooth demarcation; all pixels are divided into subpixels to permit anti-aliasing of an edge since the screen locations of edges are not known in advance. Watkins fails to disclose using any characteristic of a pixel to determine whether the pixel needs to be filtered. As such, the combination of Watkins in view of the reference given at the time the invention was made would not have suggested to one having ordinary skill in the art the subject matter defined in independent claim 1 of the invention.

The Examiner states that it would have been obvious to one of ordinary skill in the art, with the calculation of distance  $\Delta Z$  as disclosed in Watkins, not to perform filtering to the pixel if  $Z$  value of the pixel is equal to zero. However,  $\Delta Z$  of Watkins, which the examiner has equated to  $Z$  value of the claimed invention, does not perform the same function as the  $Z$  value of the claimed invention. As indicated by the Examiner,  $\Delta Z$  of Watkins is the distance between the planes of the polygons to prioritize the pixels to be filtered, but  $Z$  value of the claimed invention is the depth value of an object. As such, the combination of Watkins et al in view of

the reference given at the time the invention was made would not have suggested to one having ordinary skill in the art the subject matter defined in independent claim 1 of the invention.

Accordingly, it is respectfully submitted that independent claim 1 is patentable. Claim 3, which depends from independent claim 1, is therefore patentable for at least the same reasons set forth above regarding claim 1. Claim 5, which depends from independent claim 4, is therefore patentable as independent claim 4 is now in condition for allowance according to the foregoing amendments and remarks.

Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

### CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but merely to show the state of the prior art, no further comments are necessary with respect thereto.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: November 22, 2005

Respectfully submitted,

By 

Joe McKinney Muncy

Registration No.: 32,334

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorneys for Applicant

KM/GH/bsh

**Attachment:** Alan H. Watt, 3D Computer Graphics, p149-156; p 189-190 (3<sup>rd</sup> Edition)